

reveal other colonies on the whole six day canoe trip. Thinking this location and the fact just mentioned somewhat unusual, we thought thee would be interested to have a specimen, and the excellent photograph contributed by my friend E. S. Cary. . . ."

Alfred S. Haines, Westtown, Pa.

The habitat is indeed interesting, showing as it does the walking fern in the unusual role of an epiphyte. One ordinarily associates this species with rocky situations, and it probably reaches its best development in such regions ; but even there it is not a rock lover in the same sense as *Asplenium Trichomanes* or the genera *Pellaea* and *Woodsia*. Scattered plants often do grow along the ledges but the best growths are down below where some old moss-covered log or rock furnishes root-protection and opportunity for the leaf tips to develop new plants. The gum tree in the picture with its covering of moss or liverwort seems to have furnished the required conditions, but the origin of the colony — how it got there and whence it came — is not so easy to explain.

NEW YORK BOTANICAL GARDEN

REVIEWS

Clute's Laboratory Botany*

In this manual the author has arranged a course to cover a year's work in botany for the high school. Part I deals with the structure and life processes of angiosperms ; part II, with the structure and evolution of the plant kingdom. A list of physiological experiments is appended at the end of the book.

While the order in which the studies are arranged conforms to the plan adopted in the usual botanical text-books, the manual allows considerable flexibility in the treatment of topics as regards time of year, subject matter, and local conditions. For example, instead of beginning with the usual topics, cells or seeds, the study of trees may be taken up and provision is made by incorporating in the manual a handy key to the common broad-leaved and evergreen trees ; parts I and II may be transposed ; the physiological experiments may be performed apart from the work on morphology or they may be considered in connection with it.

* Clute, Willard N. Laboratory Botany. Pp. 172. 1909. Ginn and Co.

There is much to commend the manual to teachers. The various chapters are prefaced with useful hints on presentation, preparation, and source of materials. The choice of subjects is excellent. The questions are clear, definite, and logical, and they are designed, apparently, to give the pupil training in self-help. It is evident that the author has succeeded in preparing a valuable manual because, in large measure, he has succeeded in omitting non-essentials.

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Jepson's "A Flora of California"*

The beginnings of an ambitious and important work under the above title have recently appeared from the hand of Dr. Willis Linn Jepson, assistant professor of dendrology in the University of California. The sixty-four pages now published are neither the beginning nor the end of the completed volume or volumes, but are the pages that are concerned with the families that contain most of the Californian trees, the group to which, of late, Professor Jepson has devoted especial attention. It may be assumed that the preceding and intervening pages are in an advanced stage of preparation, otherwise the continuity of pagination might easily meet with serious difficulties. As to the scope of the work, one can at the date of writing simply draw inferences, but the limitation of what is yet to appear in front of the Gymnosperms to thirty-two pages suggests the probability of the inclusion of extended keys to the families and the improbability that a detailed treatment of the Pteridophyta will be attempted. The families of the Gymnosperms that find a place in the pages already published are the Pinaceae, with the genera *Pinus* (17 sp.), *Tsuga* (2 sp.), *Picea* (2 sp.), *Pseudotsuga* (2 sp.), and *Abies* (5 sp.); Taxodiaceae, with the genus *Sequoia* (2 sp.); Cupressaceae, with the genera *Libocedrus* (1 sp.), *Thuja* (1 sp.), *Chamæcyparis* (1 sp.), *Cupressus* (5 sp.), and *Juniperus* (4 sp.); and Taxaceae, with the genera *Taxus* (1 sp.) and *Torreya* (1 sp.). The

*Jepson, Willis Linn. A Flora of California. Pp. 33-64. f. 1-13; 337-368. f. 61-65. 4 N 1909. Cunningham, Curtiss & Welsh, San Francisco. Price 90 cts. for pp. 33-64; 80 cts. for pp. 337-368.